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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,376	12/03/2001	Michael Baldischweiler	BALD3003/JEK	9839

23364 7590 01/26/2005

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EXAMINER	
POLTORAK, PIOTR	
ART UNIT	**PAPER NUMBER**
2134	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/926,376	BALDISCHWEILER, MICHAEL	
	Examiner	Art Unit	
	Peter Poltorak	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-14 have been examined.

IDS

2. Two foreign references and one non patent reference have been received. However, no formal Information Disclosure Statement *(IDS)* document has been filed and as a result no IDS has been attached to this office action.

Priority

3. Foreign priority has been claimed in this application.
4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 04/23/1999.

Drawings

5. The drawings are objected to because Fig. 2 does not show "B-accu" which is discussed in the specification *(in reference to Fig. 2)*.
6. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Abstract

7. Applicant is reminded of the proper language and format for an abstract of the disclosure. The form and legal phraseology often used in patent claims, such as "means" and "said," *(line 3)* should be avoided.

Claim Objections

8. Claim 10 is missing a colon after "comprising".
9. The "S:\Producer\jek\BALDISCHWEILER-BALD3003\appendix of claims wpd" following claim 14 is not understood.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

11. The specification provides no guidance in teaching how a final check arising at the end of processing of an instruction by the CPU is compared with an initial check sum, with reference to the register contents arising before the onset of processing of the next instruction by the CPU.

The specification *(pg. 3§ 2-3)* teaches that "the only check sums crucial for carrying out the method are the one after execution of an instruction and the one before execution of the next instruction" and that "the initial check sum is formed as described above parallel to the loading of said second instruction." It is not understood how the CPU loads the initial check sum formed in parallel to loading of a second instruction. Fig. 2 illustrating the invention is not helpful in clarifying the issue. It is unclear where the register content (which was used to form the final check and then the initial check) resides while the content of the second instruction is loaded. The only way that is apparent for invention enablement is simply calculating the checksum twice in a row. However, the invention clearly states the purpose is to prevent manipulation of the outcome of the last instruction and not just to check the accuracy of the outcome.

The term "instruction" introduces additional level of ambiguity since instruction to the processor may be necessary to calculate the checksum *(pg. 2 §3)*.

12. Claims 2-14 are rejected by virtue of their dependence.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.

14. In claims 2 and 3 the following lack antecedent basis:

    a. Claim 2: "the clock cycles",

    b. Claim 3: "the clock signal supply".

15. Claim 1 recites: "forming a final check sum by mathematical combination with reference to register contents of the CPU arising at the end of processing of an instruction by the CPU, and stored,". It is not clear what the phrase "and stored" refers to. The "and stored" is treated as emphasizing the fact that the register contents is stored.

    The term "instruction" in claim 1 is not understood. It is unclear whether the term refers to primitive processor's instructions; assemble language instructions, some high-level language instructions or something else e.g. instruction by utilizing an application.

    For example Fortran instructions:

```
INTEGER*2 I,X(N)
INTEGER*4 AVG

C AVERAGE THE ARRAY X, STORING THE RESULT AS AVG:
AVG=0
DO 10 I=1,N
10 AVG=AVG+X(I)
```

AVG=AVG/N

are not the same as assembly language instructions *(instruction which do the same thing)*

```
mov cx,n ; cx is used as the loop
                ; counter. It starts at N and
                ; counts down to zero.
mov dx,0        ; the dx register stores the
                ; two most significant bytes of
                ; the running sum
mov ax,0        ; use ax to store the least
                ; significant bytes
mov si,offset x ; use the si register to point
```

16. The terms "form/forming" in claims 1 and 10 are not understood. It is unclear whether the terms "form/forming" refer only to "calculating" or whether they refer to some other actions related to the check sum, e.g. putting/arrange (*forming* already pre-calculated checksum) bits within the register. The examiner considers that the intended meaning of each term "form/forming" in the claim language is equivalent to "calculating".

17. Claim 3 is not understood. "Clock signal supply" is used for all types of instructions, including when kernel is in the "wait state". As a result it is not clear whether the claim indicates that the computer is powered off or simply that the instruction is being stopped. The examiner treats the limitation as error signal triggers an interrupt or leads to discontinuance of the instruction.

18. Claim 4 recites: "wherein the number of clock cycles necessary for executing an instruction is obtained by a logic circuit from the opcode of the instruction". However, opcode instruction is a result of a particular instruction. As a result the claim is not well understood. The limitation is treated as "logic circuit influences the number of clock cycles necessary for executing an instruction".
19. Claim 6 is not understood. Defined events are a subset of random events *(random event by definition can be any event)* and events can be scheduled to be random.
20. The phrase "in time-dependent fashion" in claim 7 is not clear.
21. The phrase "after processing of a predetermined number of instructions in each case" in claim 9 is not understood.
22. Claims 5, 8 and 11-14 are rejected by virtue of their dependence.

Appropriate correction is required.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571)272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571) 272-3838. The fax

phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Signature

1/18/05

Date

GREGORY MORSE
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100